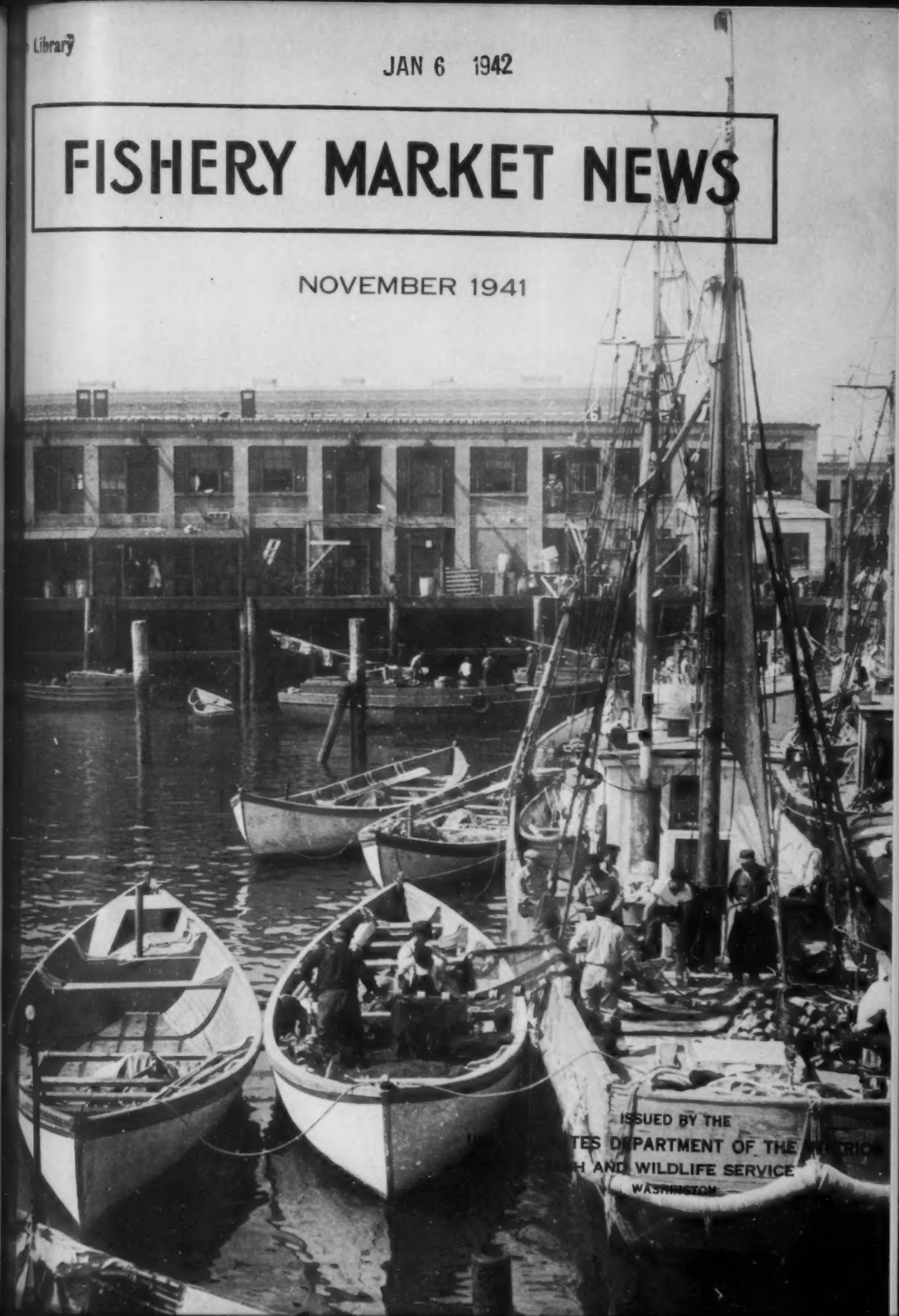
FISHERY MARKET NEWS

NOVEMBER 1941



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UNITED STATES
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FISHERY MARKET NEWS

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Applications for FISHERY MARKET NEWS, which is delivered free to members of the fishery industry and allied interests, should be addressed to the Director, Fish and Wildlife Service, United States Department of the Interior, Washington, D. C.

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FISHERY MARKET NEWS

A REVIEW OF CONDITIONS AND TRENDS OF THE COMMERCIAL FISHERIES

November 1941 Washington, D. C. Vol. 3, No. 11

SUMMARY

Special Articles

Relative Seasonal Supplies of Fishery Products at Seattle, 1940.--Over 62 million pounds of fresh and frozen fishery products in 76 classifications were landed at Seattle or received by local wholesale dealers during 1940. July was the height of the season for fin-fish while the volume of shellfish was greatest in November. Halibut was the most important fresh fish with respect to volume, and Dungeness crabs made up 47 percent of the shellfish poundage.

Food Values in Fish and Sea Foods.--Fish and shellfish are palatable foods with a high nutritive value. Vitamins are present in a number of fish and shellfish in appreciable quantities. In general, fishery products are excellent sources of phosphorous, iron, copper, iodine, and magnesium. The digestibility of fish proteins is exceptional.

New England's Fishing Industry.--Edward A. Ackerman's work is reviewed and judged a comprehensive and worthwhile addition to books on the fishing industry.

Fresh Fish

Retail food prices increased moderately from mid-September to mid-October. Pink salmon reached the highest retail price since it was first reported upon in January 1935.

An inspection service launched in Massachusetts promises better quality fillets. The catch limit on rosefish fares landed at Gloucester has been dropped.

A record run of spot occurred in North Carolina and large mullet have been abundant in Florida.

Chicago wholesale dealers are handling 13 percent more fish this year than in 1940.

Phenomenal activity in the soupfin shark and dogfish liver fisheries brought record returns to Washington fishermen in October.

Frozen Fish

Frozen food locker plants may provide a new and desirable outlet for fishery products. In mid-October cold-storage holdings of frozen fishery products exceeded the record of the previous month and reached a new record at over 107 million pounds. Freezings continued heavy. New York and Chicago cold-storage stocks were up but Boston holdings dropped 2 percent in October.

Canned Fish

Distributors' and canners' stocks showed a downward trend on October 1. Record pink and silver salmon totals made the Alaska pack the third largest in history. The British Columbia salmon pack passed 2 million cases on October 25.

Gulf shrimp and California mackerel and tuna packs are well behind the previous season, but both California and Maine sardine packs are heavy.

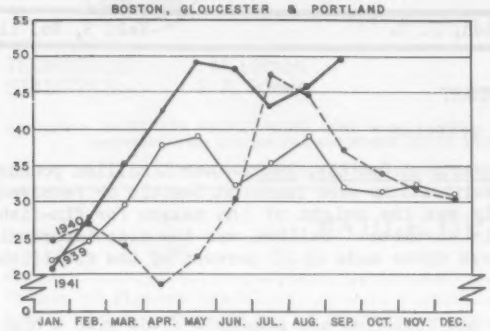
Foreign Fishery Trade

Exports of canned salmon were unusually low and exports of canned sardines unusually heavy in September. Imports of fishery products were slightly larger in the first 9 months of 1941 than during the same period in 1940, with the increase in sea herring imports particularly noticeable.

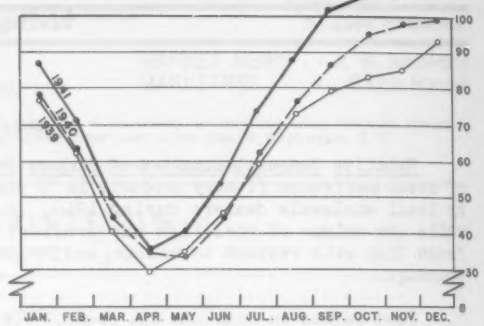
TRENDS OF FISHERY TRADE

In millions of pounds

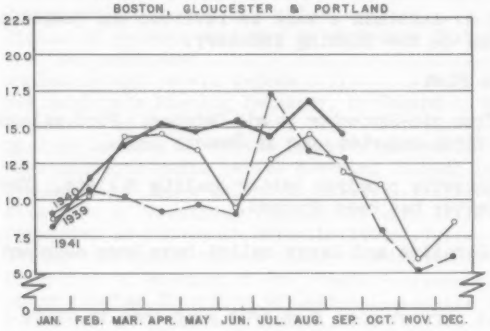
VESSEL LANDINGS, ALL FRESH FISH
BOSTON, GLOUCESTER & PORTLAND



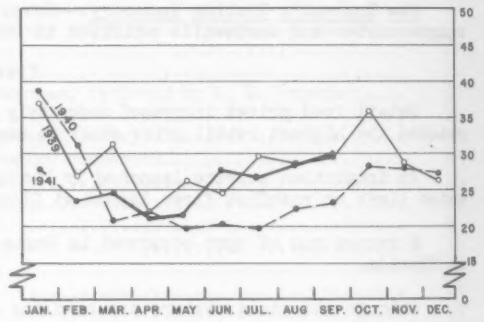
DOMESTIC COLD-STORAGE HOLDINGS OF FROZEN FISH



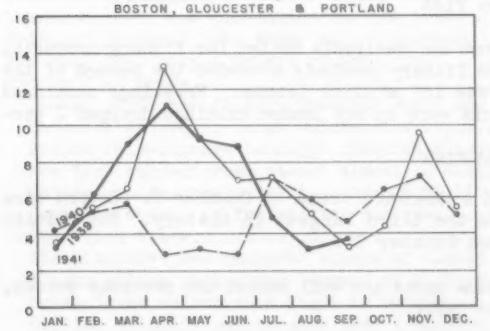
VESSEL LANDINGS, FRESH HADDOCK
BOSTON, GLOUCESTER & PORTLAND



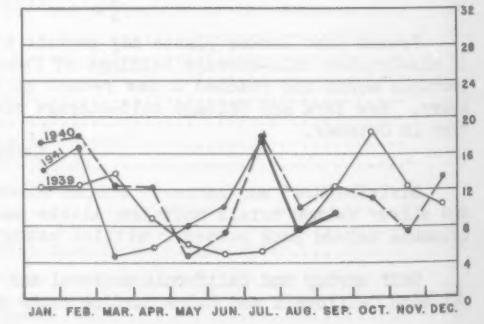
IMPORTS OF EDIBLE FISHERY COMMODITIES



VESSEL LANDINGS, FRESH COD
BOSTON, GLOUCESTER & PORTLAND



EXPORTS OF EDIBLE FISHERY COMMODITIES



RELATIVE SEASONAL SUPPLIES OF FISHERY PRODUCTS AT SEATTLE, 1940

By

V. J. Samson, Assistant Fishery Marketing Specialist
Division of Fishery Industries

U. S. Fish and Wildlife Service

As an aid in quickly determining the seasonal variations in the landings of fishery products at Seattle, as well as the relative abundance of supplies of the various species of fish and shellfish in the Seattle wholesale market, an index has been prepared from detailed data available in the monthly summaries released by the Service's Seattle Fishery Market News office. The index covers the landings of the halibut, salmon, and otter trawl fleets at Seattle, local wholesale receipts, coastwise vessel receipts from Alaska, and imports from British Columbia. Shipments from Alaska and British Columbia are listed in both fresh and frozen classifications.

In the first column of the index appears, in pounds, the total annual receipts of each classification during 1940; in the second column, the largest quantity of each item received during any one month; and in the third column, the average monthly poundage. In the following 13 columns the receipts of each classification during the month of greatest volume are represented as 100 percent. The receipts for the remaining months and the average month are expressed as percentages of the greatest monthly volume. The relative volume of each month's receipts is immediately available merely by noting the relation of its index number to 100.

During 1940 the heaviest receipts of fishery products occurred in July, with September only 8 percent less. The volume was above average from June through November with April and May practically equal to the average month. This period coincides with the halibut and salmon seasons. Receipts from December to March, inclusive, were relatively light, approximating 25 percent of the greatest month. The height of the season for fin-fish was July; for shellfish, November. In the frozen classifications the greatest monthly volumes for halibut, salmon, rockfishes, and sablefish occurred from November to February, inclusive. In general, 1940 was a normal year, and the landings and receipts of fishery products may be considered as representative of the volume of these items during recent years.

In considering the volume of receipts by species, fresh halibut led all items with a total of 19,414,051 pounds, or 33 percent of the fin-fish receipts. Fresh chinook or king salmon followed with 9,433,649 pounds, or 16 percent. Other important species were flounders, silver and chum salmon, "lingcod", and sablefish. In frozen fish receipts, halibut again led with 2,783,121 pounds, nearly all of which came from Alaska. Frozen silver salmon from Alaska accounted for 1,255,434 pounds, while total receipts of other frozen food fish did not exceed 100,000 pounds for any single species.

Definitely seasonal fish included halibut, salmon, herring, sablefish, eulachon, and albacore tuna. Varieties received in appreciable quantities during most months of the year were flounders, "lingcod", rockfishes, and silver smelt.

Receipts of Dungeness crabs, practically all from the Washington coast, totalled 1,930,528 pounds, or 47 percent of the total shellfish poundage. Shucked Pacific oysters amounted to 873,934 pounds or 21 percent. The receipts of shrimp meat from Alaska exceeded a half million pounds, or 12 percent. Dungeness crabs were received in fairly uniform quantities during all months of the year, with a slight seasonal peak during January, February, and March. Receipts of oysters were greatest during the season from September to April, inclusive, but receipts of hard-shelled clams and shrimp meat were fairly constant throughout the year. From May to August, inclusive, the local clam season is closed, and the Seattle market depends upon imports of clams from British Columbia. During these four months, however, the receipts of British Columbia clams amounted to 29 percent of the twelve months' total from all sources.

Seventy-six classifications of fishery products are listed in the following table.

MONTHLY INDEX OF RECEIPTS OF FISHERY PRODUCTS AT SEATTLE, 1940
(Expressed for each classification in percentages of its greatest monthly volume)

Variety and Source	Year	Greatest month	Average month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
SALT-WATER FISH	Pounds	Pounds	Pounds													
Cod, local	400,416	99,918	33,368	100	61	39	20	5	2	2	2	14	22	44	89	33
Dolly Varden trout:																
Alaska	24,360	10,283	4,812	-	-	-	32	100	73	28	2	-	-	-	-	47
Frozen, Alaska	11,898	4,493	1,700	28	28	28	-	-	2	49	29	100	-	-	-	37
Flounders:																
"Sole," local	4,482,944	846,006	373,579	26	23	19	28	31	44	69	97	100	58	15	19	44
Other, local	523,575	168,429	65,446	94	46	17	3	-	-	-	-	11	100	17	23	38
Total	5,006,519	864,647	417,210	44	32	22	27	30	43	68	95	100	76	18	23	48
Halibut:																
No. 1 - Exchange*	10,273,557	1,955,944	1,467,651	-	-	-	100	84	78	97	56	66	43	-	-	75
No. 2 - Exchange*	8,310,673	1,706,834	1,187,239	-	-	-	57	79	89	100	58	63	40	-	-	70
Unclassified, local	261,017	104,036	43,502	-	-	-	40	68	100	40	1	1	-	-	-	42
Subtotal	18,845,247	3,647,293	2,692,178	-	-	-	82	84	86	100	57	65	42	-	-	74
Unclassified:																
Alaska	411,831	306,876	58,833	-	-	-	100	4	6	2	1	10	11	-	-	19
Frozen, Alaska	2,720,638	721,904	247,331	62	50	3	-	1	13	24	4	26	100	51	42	34
British Columbia	156,973	71,057	31,395	-	-	-	100	35	55	16	-	15	-	-	-	44
Frozen, B. C.	62,483	40,610	20,827	-	-	51	100	-	-	-	-	-	-	3	-	51
Total fresh	19,414,051	3,665,255	2,773,435	-	-	-	91	84	87	100	57	66	43	-	-	76
Total frozen	2,783,121	721,904	231,927	62	50	6	6	1	13	24	4	26	100	52	42	32
Herring:																
Local	427,392	295,619	106,848	9	36	100	-	1	-	-	-	-	-	-	-	36
British Columbia	483,525	462,690	241,762	-	-	-	-	-	-	-	-	-	4	100	-	52
Total	910,917	463,078	182,183	5	23	64	-	-	-	-	-	-	4	100	-	39
Herring (bait), frozen:																
Alaska	416,000	156,000	59,428	-	-	64	-	6	100	51	13	-	-	13	19	38
British Columbia	4,100	4,100	4,100	-	100	-	-	-	-	-	-	-	-	-	-	100
Total	420,100	156,000	52,512	-	3	64	-	6	100	51	13	-	-	13	19	34
"Lingcod":																
Local	2,974,461	416,871	247,872	58	70	29	47	50	80	100	96	51	25	45	63	59
British Columbia	161,627	45,401	26,937	31	-	100	89	57	42	37	-	-	-	-	-	59
Total	3,136,088	433,766	261,341	59	67	38	54	54	81	100	92	49	24	43	60	60

MONTHLY INDEX OF RECEIPTS OF FISHERY PRODUCTS AT SEATTLE, 1940

Total	3,136,088	433,766	261,341	59	67	38	54	54	81	100	92	49	24	43	60	60	

MONTHLY INDEX OF RECEIPTS OF FISHERY PRODUCTS AT SEATTLE, 1940
(Expressed for each classification in percentages of its greatest monthly volume)

Variety and Source	Year	Greatest month	Average month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
SALT-WATER FISH—(Contd.)	Pounds	Pounds	Pounds													
Rockfishes:																
Local	809,454	131,887	67,454	61	100	83	49	29	23	20	24	47	44	56	77	51
Alaska	5,850	5,850	5,850	-	100	-	-	-	-	-	-	-	-	-	-	100
British Columbia	11,061	4,690	2,212	19	100	61	34	22	-	-	-	-	-	-	-	47
Total	826,365	142,427	68,864	58	100	79	46	27	22	18	22	44	41	52	71	48
Frozen, Alaska	94,924	19,040	7,910	100	5	55	6	29	39	90	17	30	52	49	25	42
Sablefish:																
Local	2,375,400	850,226	296,925	-	5	-	-	-	2	11	28	77	100	51	4	35
Frozen, Alaska	546,294	234,982	49,663	22	28	11	2	-	2	2	1	20	8	36	100	21
Salmon:																
Chinook or king:																
Local	6,809,474	2,003,495	756,608	-	1	5	15	20	32	100	90	60	15	-	-	38
Alaska	987,712	431,402	109,745	3	3	8	25	100	79	6	-	-	-	1	3	25
British Columbia	1,636,463	458,859	181,829	-	1	18	54	38	71	100	35	10	28	-	-	40
Total	9,433,649	2,488,164	857,604	1	2	9	26	41	53	100	79	50	17	-	1	34
Frozen, Alaska	212,968	40,200	26,621	93	100	89	-	-	-	62	72	20	77	15	-	66
Frozen, B. C.	67,365	49,695	16,841	-	100	12	-	-	-	-	-	14	10	-	-	34
Total	280,333	89,895	35,041	42	100	47	-	-	-	28	32	17	40	7	-	39
Chum or keta:																
Local	4,245,873	2,549,931	849,175	2	2	-	-	-	-	-	-	-	52	100	9	33
British Columbia	245,954	125,590	49,190	-	-	-	-	-	-	-	4	2	84	100	5	39
Total	4,491,827	2,675,521	1,122,956	2	2	-	-	-	-	-	-	-	54	100	9	42
Frozen, Alaska	22,078	15,100	5,519	100	-	4	-	-	-	-	-	-	26	16	-	37
Pink or humpback:																
Local	20,907	10,948	6,969	-	-	-	-	-	-	2	89	100	-	-	-	64
Frozen, Alaska	6,000	6,000	6,000	-	100	-	-	-	-	-	-	-	-	-	-	100
Silver or coho:																
Local	4,949,016	2,022,738	618,627	-	-	-	-	1	11	40	47	100	39	6	1	31
British Columbia	73,781	35,038	18,445	-	-	-	1	26	100	83	-	-	-	-	-	53
Total	5,022,797	2,022,738	627,849	-	-	-	-	1	12	41	47	100	39	6	1	31
Frozen, Alaska	1,255,434	343,062	125,543	69	26	95	4	-	-	1	17	2	26	100	25	37
Sockeye or red:																
Local	176,035	115,895	58,678	-	-	-	-	-	-	50	100	2	-	-	-	51
British Columbia	15,354	14,888	5,118	-	-	-	-	2	1	-	100	-	-	-	-	34
Total	191,389	130,783	63,796	-	-	-	-	-	-	44	100	2	-	-	-	49

MONTHLY INDEX OF RECEIPTS OF FISHERY PRODUCTS AT SEATTLE, 1940
(Expressed for each classification in percentages of its greatest monthly volume)

Variety and Source	Year	Greatest month	Average month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
SALT-WATER FISH--(Contd.)	Pounds	Pounds	Pounds													
Salmon---(Contd.)																
Unclassified:																
Alaska	3,631	3,631	3,631	-	-	-	-	-	-	100	-	-	-	-	-	100
Frozen, Alaska	398,369	147,167	44,263	11	8	-	-	-	2	1	30	63	100	35	20	30
Smelt:																
Eulachon, local	141,000	89,000	47,000	8	50	100	-	-	-	-	-	-	-	-	-	53
Silver, local	480,976	74,766	40,081	26	6	4	1	39	86	98	100	74	58	94	55	54
Tuna, albacore, local	416,773	229,959	104,193	-	-	-	-	-	-	46	100	20	15	-	-	45
Total fish:																
Local	48,078,943	7,819,358	4,006,579	12	13	12	48	51	62	100	86	96	73	46	13	51
Alaska	7,117,987	1,058,211	593,166	79	56	52	42	45	60	33	18	36	100	84	66	56
British Columbia	2,918,686	590,932	243,242	2	11	27	68	39	71	87	31	11	44	100	1	41
All	58,115,616	8,686,773	4,842,986	20	19	19	53	54	68	100	82	92	81	59	20	56
SHELLFISH																
Clams, hard (meats):																
Local	319,248	45,249	35,472	100	86	97	95	5	-	-	-	85	79	77	81	78
British Columbia	130,104	35,808	21,684	-	-	5	-	74	94	87	100	-	-	-	2	61
Total	449,352	45,565	37,446	99	85	100	94	64	74	68	79	84	79	76	83	82
Crabs, local	1,930,528	195,184	160,877	97	100	98	86	77	61	66	71	72	88	92	80	82
Oysters; local; (meats):																
Olympia, shell	28,781	4,024	2,398	70	67	64	52	30	30	30	43	57	83	88	100	60
Olympia, shucked	23,031	5,040	1,919	39	32	25	25	23	13	21	27	39	35	71	100	38
Pacific, shell	171,451	32,603	14,288	64	70	59	59	25	14	29	41	100	16	19	32	44
Pacific, shucked	873,934	155,470	72,828	71	61	47	29	17	10	7	9	31	88	91	100	47
Octopus, local	32,732	4,268	2,728	70	84	76	84	64	45	31	16	48	55	93	100	64
Scallops, bay (meats), local	15,595	1,750	1,300	70	79	77	59	63	65	76	100	77	72	77	74	74
Shrimp, local	36,345	7,773	3,634	4	-	-	90	29	14	26	33	62	100	54	54	47
Shrimp meat, Alaska	504,650	71,600	42,054	100	66	52	7	57	62	52	57	57	80	55	60	59
Squid, local	50,405	20,445	7,200	51	8	6	-	-	-	-	-	7	20	100	54	35
Total shellfish	4,116,804	399,334	343,067	97	90	84	73	49	36	39	43	69	93	100	98	86
Total fish and shellfish	62,232,420	8,910,689	5,186,035	25	24	23	55	56	69	100	83	92	83	63	24	58

* Seattle Fish Exchange.
NOTE.--Includes receipts of fresh and frozen fish and shellfish from Alaska and British Columbia. Sources listed as "local" are

FOOD VALUES IN FISH AND SEA FOODS

Address by Dr. Hugo Nilson
Assistant Pharmacologist

Fish and Wildlife Service
College Park, Md.

It is indeed a pleasure to be here and address the National Food Distributors' Association. I only wish that complete information was available on the subject assigned to me so that you could get all the data you want in tabulated form for easy reference. However, the knowledge of nutrition is advancing so rapidly these days that unfortunately it is almost impossible to even evaluate the chemical and biological assay methods which have been promulgated for determining food value, let alone carry the oftentimes complicated and time consuming methods to completion. But then, there are certain data available which you can make good use of and which should meet most of your needs.

Nearly three billion pounds of fish and shellfish per year are taken commercially for food in the United States and Alaska. The Chicago market handles about 59,400,000 lbs. of fresh and frozen fish and shellfish per year of which roughly three-fourths is brought in from 34 States and Alaska. The remainder arrives "in bond" from Alaska or is shipped from eight Canadian Provinces. The shipments are almost equally divided between truck, express, and freight transportation.

These data do not have much to do with food value but they do indicate roughly the widespread territory from which fish and shellfish must be brought in order to satisfy the consumer's demand for the kinds he is accustomed to or has developed a liking for. Most people unfortunately think in terms of only a few species, which due to their popularity and comparative scarcity demand fairly high prices. Most of you probably do not realize that salt-water species of fish are sold under 150 names, fresh water species under 60 names and shellfish under 20 names. Some species are sold under one or more local names, but even so, many varieties of fish and shellfish are available, and many varieties which are really good eating can be purchased very reasonably during any period of the year. The housewife can be pleasantly surprised and the men-folks delighted when an untried species has been prepared or a new recipe applied. As one of the research members in our laboratory who was studying fish-cookery methods used to tell me, "Try this, it will be something that you will be willing to get up on a chair and sing for."

Of the 59,400,000 lbs. of fresh and frozen fish sold on the Chicago market last year, the fresh-water species accounted for 54 per cent, the salt-water species for 27 per cent, and the shellfish and miscellaneous for 19 per cent of the total. There was an increase in receipts of 23 per cent over 1939. Halibut with 7,700,000 lbs. was shipped into Chicago in greater volume than any other item and dominated the salt-water fishery supplies. Shrimp with 7,500,000 lbs. was second and was the favorite shellfish. Lake trout with 6,000,000 lbs. was third and supplied the largest volume of fresh water fish. Whitefish was fourth with 3,900,000 lbs.; lake herring was fifth with 3,600,000 lbs.; sauger was sixth with 3,500,000 lbs.; and rosefish fillets was seventh with 3,200,000 lbs.

The per capita consumption of fish and shellfish is now about 13 lbs. per year. The great advances in transportation and refrigeration made in the past few years should increase the availability of desirable quality fishery products. Moreover, the preparation of fillets or "ready for the kitchen packs" of fishery products at the producing centers should increase the inducement to cook more fish.

Bother, bones, and smell are the three hindrances to a greater per capita consumption. The producer or retailer can eliminate the bother and the bones, and really fresh fish will neither smell up the kitchen nor the dishes. Eating fresh quality fish is really a pleasure.

At the present time when food values are discussed, the average person immediately thinks only in terms of vitamins and minerals. Yet, the bulk of the food we eat is needed to supply energy in adults and to build tissues and supply energy in growing children. We still eat a nice piece of fish or a thick steak, or drink a glass of milk with pleasure as food and not as medicine. Vitamins and minerals are important and care should be taken to balance the intake by eating a variety of foods. Acute or chronic vitamin or mineral

deficiencies are common to those who have to live on low incomes or to those who have too narrow a range of likes and so many dislikes that they practically subsist on a few foods which are expected to do the impossible.

Of course, fishery products contain their share of vitamins and minerals. In fatty fish, the oil contains appreciable amounts of vitamins A and D; therefore, it is a mistake to broil out the oil from mackerel or throw away the oil from a can of salmon. Food value is lost, and flavor is impaired.

Most fishery products, however, contain very little fat. A recent report in a Journal of Physiology concludes that the vitamin A content of fish flesh is not necessarily dependent on the oil content. Carp flesh which contains practically no fat contains a reasonably high content of vitamin A. We hope to investigate this problem further.

VITAMIN CONTENT PER SERVING OF CERTAIN FISHERY PRODUCTS

Variety	Vitamin A I.U.	Thiamin (B_1) micrograms	Riboflavin (B_2) micrograms	Nicotinic acid milligrams	Vitamin C milligrams	Vitamin D I.U.
Cod	X	273	400	7	4.5	X
Crabmeat	-	317	220	4	3	-
Haddock	X	136	375	-	-	-
Halibut	X	193	420	14	-	-
Herring	908	38	-	9	-	1,020
Mackerel	399	204	1,500	13	-	2,500
Oysters	300	113	-	-	-	7
Salmon, canned	113	204	567	7	-	907
Sardines	153	104	454	4	-	635

X Vitamin lacking or present in insignificant amounts.
- No reliable values available.
Note—The weights of servings used are one-half pound for fresh fish, one-third pound of meat for shellfish, and one-fourth pound for canned fish.

Much of the discussion of vitamins in foods at the present time centers about the vitamin B content. The vitamin B complex is made up of a number of vitamins including thiamin (B_1), riboflavin, nicotinic acid, pantothenic acid and pyrodoxin (B_6). So far we or others have had no time to make any comprehensive assays of the content of these vitamins in fishery products.

The vitamin B_1, or thiamin content of fish flesh is about 180 micrograms per ½-pound portion, which compares with 100 micrograms for chicken meat, 225 for beef muscle, and 1600 micrograms per portion of pork. Crab meat contains more than twice as much thiamin as the average fish flesh. We hope to begin an extensive series of assays this fall so we shall have more information on the thiamin content of fish and shellfish.

Very few assays have been made to determine the riboflavin content of fishery products. Cod flesh assays 400 micrograms per ¼-pound portion. These figures compare very favorably with the published results for muscle meats of farm animals.

Canned salmon has long been used to aid in curing the symptoms of pellagra and recent assays show that salmon contains about 7 milligrams of nicotinic acid per ¼-pound portion. Halibut contains 12 milligrams, and flounder 8 milligrams per ½-pound portion, and crab meat 4 milligrams per 1/3-pound portion. These data compare favorably with those of meat except liver which is a very good source of nicotinic acid.

So little work has been done to determine the content of other vitamins that no reference can be cited.

In respect to mineral content, the flesh of fish and shellfish has long been known to be an excellent source of iodine, iron and copper. The data are too numerous to quote but, in general, oysters and shrimp are the richest sources of iron and copper, and some of the marine fish fillets and canned salmon are excellent sources of iodine.

Few people realize that some fishery products also contain considerable quantities of calcium, phosphorus, and magnesium. The content of these elements in most fish fillets is about equal to that in beef round. On the other hand, oysters, shrimp, and crab meat contain approximately half as much calcium, five or more times the amount of magnesium and more phosphorus than an equal quantity of milk. I use these figures strictly as a matter of comparison and not as a recommendation to feed babies oysters or crab meat instead of milk as a lady once attempted to imply in a speech. The bones of canned fish should be eaten since they are a good source of calcium and phosphorus.

THE MINERAL CONTENT OF VARIOUS SEAFOODS

(Investigational Report 41 "The Mineral Content of the Edible Portions of Some American Fishery Products")

Species	Number	Dry matter	Calcium	Magnesium	Phosphorus	Iron	Copper	Iodine
FILLETS								
Cod (Gadus morrhua)	4	17.7	0.0110	0.0280	0.1859	0.000518	0.000041	0.000103
Haddock (Melanogrammus aeglefinus)	4	18.7	.0165	.0236	.1731	.000516	.000041	.000513
Mackerel (Scomber scombrus)	2	19.9	.0048	.0281	.2169	.001224	.000115	.000053
Red snapper (Lutianus blackfordii)	3	21.7	.0162	.0276	.2279	.001158	.000038	.000031
Mullet (Mugil cephalus)	3	23.9	.0261	.0318	.2198	.001779	.000082	.000485
Pilchard, California (Sardina caerulea)	2	20.5	.0422	.0237	.2115	.002483	.000166	.000013
Flounder (Pleuronectidae species)	2	21.3	.0117	.0305	.2053	-	-	.000029
Lake herring (Leucichthys artedi)	1	17.9	.0116	.0172	.1518	-	-	-
CANNED SALMON								
Red (Oncorhynchus nerka)	3	31.3	0.2082	0.0292	0.3364	0.001180	0.000081	0.000053
Chinook (Oncorhynchus tschawytscha)	3	33.2	.1071	.0267	.2778	.001270	.000077	.000067
Coho (Oncorhynchus kisutch)	2	30.1	.2304	.0298	.3382	.000890	.000064	.000023
Pink (Oncorhynchus gorbuscha)	2	29.6	.1735	.0299	.3206	.000760	.000056	.000021
Chum (Oncorhynchus keta)	2	27.3	.2492	.0299	.3518	.000740	.000050	.000022
SHELLFISH								
Oysters, Eastern (Ostrea virginica)	4	15.0	0.0579	0.0320	0.1121	0.006100	0.003730	0.000049
Oysters, Pacific, natives (Ostrea lurida)	2	17.9	.0632	.0242	.1540	.004940	.001240	.000030
Oysters, Pacific, Japanese (Ostrea gigas)	2	21.4	.0628	.0480	.1922	.007510	.001230	.000036
Shrimp, raw (Peneus brasiliensis)	4	20.0	.0542	.0421	.2285	.002188	.000331	.000023
Shrimp, boiled	2	28.7	.0614	.0509	.2432	.003973	.000302	.000021
Blue crab, white meat (Callinectes sapidus)	4	21.1	.1028	.0336	.2052	.002262	.001582	.000042
Blue crab, claw meat	3	20.4	.0706	.0345	.1796	.000746	.000368	.000015

Note:--Four units to the right of the decimal point equals parts per million, or mgms per kgm.

In the final analysis, however, fishery products are eaten for gustatory satisfaction and as a source of protein. The average portion of fish and shellfish supplies from one-quarter to one-half of the daily needed allowance of protein.

The food value of a protein depends on two factors. First is the relative quantity that is absorbed from the intestinal tract into the body, the index of which function is termed digestibility. The proteins having the highest nutritive value are usually very nearly completely digested. Experiments conducted in our laboratory at College Park, Md., have shown that the proteins from fishery products are rather completely digested. Of the proteins so far tested, including the protein from haddock, mackerel, and several crab meats, the true digestibility has ranged from 88 to 98 per cent as compared with 70 per cent for beef round. In other words, this means that very little of the protein from seafoods is wasted. All except a very small amount can be utilized.

The second index of the food value of protein is the so-called biological value. This index measures the degree of utilization of protein after it has been absorbed into the

body. There are a number of indexes that can be used, for example, the biological value of a protein for maintenance, for growth, for lactation, or for other body functions.

The experiments conducted in our laboratory indicate that the biological value of the protein is equal or superior to that of beef round. Oyster protein is by far the best protein we have been able to find to date. Several other proteins from fishery products are almost as satisfactory. In general, we are very pleased indeed to find that the proteins from fishery products rank so high both in digestibility and food value.

In summary, fishery products have passed the tests which show that they are indeed foods having a high nutritive value. The flesh of fish and shellfish contains appreciable amounts of several vitamins. Marine products are rich in iodine and many seafoods contain appreciable amounts of calcium, phosphorus, iron,and copper. Finally, the protein of fish and shellfish is very digestible and has a high food value.

Furthermore, fish and shellfish are economical foods and can well be included in the diet during several days of the week. However, the problem of distribution and packaging is the major hurdle which has to be passed before we can expect any major increase in consumption. That is your problem as well as ours and we hope that by working together we may solve it to the benefit of consumers, fishermen and ourselves.

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BIRD CONTROL MAY REMEDY PERIODICAL SCARCITY OF ATLANTIC SALMON

The summary of an article on "Cyclical Abundance and Birds Versus Salmon" in the July 1941 issue of the Journal of the Fisheries Research Board of Canada reports that the "Periodical scarcity of Atlantic salmon, more pronounced in districts where man's influence was least, was predicted from analysis of statistics of the catches as caused by some factor acting unfavorably on the young salmon about the time of their descent to the sea as smolts.

"Kingfishers and mergansers take the salmon parr during their last year in the river and to that degree qualify as the factor for periodic scarcity.

"The low, clear water of dry summers permits thorough removal of the young salmon by birds, and, so far as tested, dry summers have preceded the periodical scarcities at the proper interval.

"Experimental elimination of the birds from a stream more than doubled the number of salmon smolts descending subsequently. Analysis of the attendant circumstances eliminates extent of spawning and height of water as causative factors for the increase.

"In the proper year subsequent to the bird control the catch of salmon in the sea was much greater than was to be expected from the dryness of the season of control. . . "

"It is concluded that control of birds may remedy periodical scarcity.

"Man's presence is seen as favouring young salmon by driving or frightening away the fish-eating birds."

FROZEN FOOD LOCKER PLANTS OUTLET FOR FISHERY PRODUCTS

In a recent issue of Ice and Refrigeration an article on the problems encountered in operating frozen food locker plants reports that frozen fish is a fine item for locker plants to purchase and distribute to their customers. The plant in question--located in Wisconsin--purchased 5 tons of rosefish fillets for sale to its patrons and reported a good return on its investment as well as providing its customers with an added variety of foods.

Another plant in Minnesota purchased smelt during the run and cleaned, froze, and packed them. The processing operation was profitable although dressing the fish resulted in a one-third loss in weight.

From these instances it would seem that the locker plant field offers particular advantages to the fishing industry, particularly with respect to wider distribution of fishery products in relatively large quantities.

COOPERATION TO BE TAUGHT AT FISHERMENS' UNION HEADQUARTERS

The Massachusetts Department of Education has announced a university extension course in consumer cooperation. It apparently is designed primarily to reach members of the Atlantic Fishermen's Union and their families, as it will be held at the Union's headquarters in Boston. The program is announced as follows:

November 4 - Consumer Cooperation as a Way of Supplying Human Needs.
Dr. James Peter Warbasse, President Emeritus, Cooperative League of U. S. A.
November 18 - Are Cooperatives Radical or Revolutionary?
Rev. Michael J. Ahern, S. J., Weston College.
November 25 - The Social Significance of Cooperative Enterprise.
Rev. Joseph MacDonnell, S. J., Weston College.
December 2, Trade Unions and Cooperatives.
Harry Russell, Secretary-Treasurer, Massachusetts State Branch Engineers' Union.
December 9, The Retailers' Attitude Toward Cooperatives.
Joseph Sawyer, Department Manager, Basement, R. H. White Company.
December 18, Practical Cooperation.
Waldemar Niemela, Manager, Eastern Cooperative Wholesale, Boston Branch.
January 6 - Making Cooperatives Succeed.
Charles Manty, President, United Cooperative Society of Maynard.
January 13 - Credit Unions.
Agnes C. Gartland, Treasurer and Managing Director, Massachusetts CUNA Association.
January 18 - Consumers' Union.
Colston E. Warne, President, Consumers Union.
January 25 - How Consumers Function to Obtain Their Money's Worth.
Ethel Fair, Educational Director, Atlantic Fishermen's Union.

Time - The course will meet weekly on Tuesdays, from 8:00 to 9:30 P. M., beginning November 4, 1941.
Place - Atlantic Fishermen's Union, 683 Atlantic Avenue (corner Essex Street, opposite South Station), Boston, Massachusetts.
Lessons - Ten Lessons for $5.00. Enrollment may be made at the first meeting or previously at the office of the Division of University Extension, 200 Newbury Street, Boston, Massachusetts.

TEMPERATURE AND SALINITY AFFECT OYSTERS

The abstract of an article entitled "The Influence of Temperature and Salinity on the Condition of Oysters (Ostrea virginica)" in the July 1941 issue of the Journal of the Fisheries Research Board of Canada states that "Below 5° C. (41° F.) oysters do not change in fatness, as judged by the ratio, dry weight to space between the valves. Between 5°(41° F.) and 15°(59°F.) they get thin. Between 15°(59° F.) and 20°(68° F.) they fatten. Above 20°(68°F.) they may fatten slightly but spawning makes them thin. When the salinity drops below 20 parts per thousand no fattening takes place even at temperatures between 15°(59° F.) and 20°(68°F.)."

STATUS OF PERSONS EMPLOYED BY WHOLESALE FISH DEALERS UNDER THE FAIR LABOR STANDARDS ACT ANNOUNCED

On October 17 General Philip B. Fleming, Administrator of the Wage and Hour Division of the Department of Labor announced an interpretation of the Fair Labor Standards Act relative to employees of wholesalers handling fishery products.

The interpretation was based upon the exemption from both the wage and hour provisions provided for in section 13(a)(5) of the Act.

"any employee employed in the catching * * * of any kind of fish, shellfish, crustacea, sponges, seaweeds, or other aquatic forms of animal and vegetable life, * * * including employment in the loading, unloading, or packing of such products for shipment or in propagating, processing, marketing, freezing, canning, curing, storing, or distributing the above products or byproducts thereof;"

Numerous inquiries have been submitted to the Administrator concerning the status under this exemption of employees of a typical fish wholesale house which handles fresh fish packed in ice, frozen fish, and smoked or otherwise cured fish products. General Fleming announced that in the enforcement of the statute, employees engaged in marketing and distributing edible fish and fisheries products would be considered by the Division to be exempt from both the wage and hour provisions of the act whether they were engaged in performing such operations on fresh fish or on fishery products that had been preserved through freezing, smoking or curing. The Administrator made it clear, however, that the exemption does not extend to employees engaged in the wholesale distribution of fishery products packed in hermetically sealed containers. Those employees of a wholesale fish establishment who devote a substantial amount of their time to operations in connection with fishery products packed in hermetically sealed containers will not be considered to be exempt from the act, General Fleming declared. The Administrator explained that the phrase "substantial amount of time" will be construed by the Division to mean in excess of 20 percent of an employee's working time in a work week. This percentage figure has consistently been adopted by the Administrator in the construction of exemption provisions under the statute.

General Fleming also called attention to the interpretations of this section of the act which have been followed since July 1939 when Interpretative Bulletin No. 12 was issued setting forth the scope and applicability of the exemptions provided by section 13(a)(5) of the act. He called attention particularly to the interpretation that "office employees" would not ordinarily come within the exemption provided by section 13(a)(5) because they do not engage in operations described in this section. Only those office employees such as clerks in the shipping department of a wholesale fish establishment, who direct the shipment of the product would seem to be engaged in "marketing", or "distributing" within the meaning of those words as used in the section. Other office employees of such an employer would not be exempt. Similarly, other employees such as watchmen who are not engaged in the operations enumerated in the section are not exempt by the statute.

The Administrator also pointed out that the interpretation merely represented a statement of the enforcement policy of the Division which will continue unless and until he is directed otherwise by authoritative ruling of the courts. It in no way limits the right of employees to bring suits as provided in section 16(b) of the statute.

WHOLESALE AND RETAIL PRICES

With a marked rise in agricultural commodity markets, particularly for livestock and fruits and vegetables, there was a gain of 0.4 percent in their wholesale price index of nearly 900 series during the week ended November 1, according to the Bureau of Labor Statistics. At 91.6 percent of the 1926 average, the all-commodity index is near the recent peak and is about 17 percent above a year ago. Prices for foodstuffs at wholesale rose moderately. Average prices for building materials rose fractionally and following a two-week period of falling prices, industrial fats and oils resumed their upward movement and rose 1.5 percent during the week.

Retail food prices increased somewhat more moderately between September 16 and October 14 than during other recent months, with an advance in total food costs of 0.8 percent during the month. Increases in retail prices this year have followed very large advances in wholesale markets which reflect the result of various Government programs, such as increased Government loan values on basic farm products and purchases under the "Food for Defense Program", as well as greater industrial activity with accompanying larger consumer incomes, and speculative buying.

On October 14 the Bureau of Labor Statistics' index of retail food costs was 111.6 percent of the 1935-39 average, the highest level since January 1931. The increase since October 1940 has amounted to 16 percent. On October 14, pink salmon reached the highest price level reported since it was first priced by the Bureau in January 1935. Since August 1939, just prior to the outbreak of the European war, fresh and canned fish prices have risen 32 percent.

The average retail price of a 1-pound tall can of pink salmon in 51 cities on October 14 was 19.9 cents, 0.5 percent above September 16, and 26.8 percent higher than a year ago. Red salmon retailed at 35.3 cents for a 1-pound can, 4.7 percent more than in September, and 35.8 percent above the previous year.

NEW ENGLAND'S FISHING INDUSTRY, pp. XIX, 303

By

Edward A. Ackerman

Published by the University of Chicago Press, 1941. $4.00

In "New England's Fishing Industry", the author, instructor in geography at Harvard University, has presented that region as well as the commercial industry of the country as a whole with a thoroughly interesting book. Its 300 pages go beyond a mere description of the physical characteristics of the local fishery to include a surprisingly successful attempt to explain its cultural features—the products of human workmanship concerned with the fisheries, the commercial organization of the industry, and the forces behind the marketing and distributional functions.

To begin his study the author describes how the fisheries preceded the settlement of New England, how the fortune of the sea affected its future and played an intimate part in the development of many of the regional manufacturing industries for which New England has been noted. A brief chapter on locational factors points up New England's possession of one of the world's great fishing areas and leads to a description of the sea life entering its commercial fisheries. The development and adaptation of fishing methods in New England, with the advantages and disadvantages of each, is well explained, particularly with respect to the effects on the shore operation of the industry. His discussion of the restrictive forces of Federal and State laws and regulations is important because it emphasizes the localizing effect of such limitations and suggests the dependence of New England industry on political factors. The chapter is a splendid summary of legislative regulations of the several States as applied to every phase of the fisheries.

The location of New England's markets and the effectiveness of its transportation facilities are fitted into the picture, an indication of their influence being the conclusion that the particular method of processing utilized at a fishing port frequently is the result of the port's location on land rather than its position with relation to the sea.

Each type of processing is handled in detail and the factors affecting its future assessed. The senile salting industry is headed for probable insignificance. Smoking is unimportant and labors under competitive difficulties. Canning is confronted with high costs and the inherent disadvantage of a location in the midst of a fresh fish industry. The fresh and frozen fish trade, therefore, is supreme in New England and offers the best opportunity for development. Nevertheless the prosperity of its fishing ports, particularly those supplying the fresh and frozen trade, varies almost directly with the distance from markets.

The book is abundantly and excellently illustrated with well over one hundred photographs which picture every section of the industry. Thirty-three charts graphically portray the catch and the grounds on which the more important species are taken. A number of related subjects also are charted. For the statistically inclined, almost a score of tables are employed to list everything from the North Atlantic mackerel catch to carload rates on canned fish. One of the most interesting is entitled "Forms in which New England Fish are Distributed Within and Exported from the Region". The end sheets of the book, in white on a pleasing blue background, outline New England's fishing grounds and depict the geographical relationships of the multitude of fishing centers mentioned in the text.

The book reads smoothly, the last few paragraphs of each chapter tying it to the subject in the one following. Numerous footnotes add pertinent details, and every chapter is followed by a splendid reference list of fishery publications.

In all respects "New England's Fishing Industry" is a worthy addition to the field of fishery publications. Similar studies of our other fisheries and the regions from which they are prosecuted would be of value to all those pursuing any phase of our commercial fishery operations.

A. W. Anderson
Fish and Wildlife Service

FISHERIES OF MASSACHUSETTS

The labor supply in the various branches of the fishing industry in Massachusetts is getting scarce, according to a recent report from the Service's agent in that State. A large firm has used newspaper display advertisements in an attempt to obtain girls for filleting work, and retail stores in various parts of the State have advertised in Boston papers for fish cutters. During September the Army chartered five large otter trawlers. They were the Fabia, Lark, Cormorant, Flow and Cambridge. It was reported that they were to be converted into freighters for use between Boston and Iceland.

Receipts of swordfish to October 1 numbered only 2,995 fish as compared with 5,626 for the same period in 1940. Since vessels are no longer active in the swordfish fishery, the figures are practically final for the season. Imports of swordfish from Canada into Massachusetts likewise dropped. In 1941 only 3,700 fish were imported as compared with 5,811 last year. Imports of swordfish from Japan also have been far below the previous year's total.

In mid-October the limit on catches of rosefish landed at Gloucester was dropped and all vessels are now permitted to land as many pounds of this variety as can be caught. The productivity of rosefish in Maine waters fell away to such a degree during the past month that nearly all the larger draggers either are already fishing off the Nova Scotia Cape shore or soon will begin to do so. The diminished supply in local waters is a yearly occurrence and not due to overfishing since rosefish are most plentiful in Maine waters only throughout the warmer months of the year. Elimination of the catch limit will make it more profitable to fish Nova Scotian waters since the trip to the grounds and back is longer, averaging about 36 hours each way.

Gloucester wholesale dealers and wharf workers have asked that the 4-day hold-over between trips also be abandoned due to the diminished landings. However, at a meeting of seafood workers and fishermen it was voted not to eliminate the hold-over period.

On October 20 wholesale dealers raised the rosefish price to $2.10 per hundred pounds in Gloucester, and all indications point to a still higher price before the winter is over.

QUALITY CONTROL OF FILLET INDUSTRY PLANNED IN MASSACHUSETTS

During October the Massachusetts Fisheries Association inaugurated an inspection service which may be extended throughout the fish handling industry in New England. At the suggestion of the Food and Drug Administration, inspectors are being trained through the cooperation of the Army Veterinary Corps, representatives of the inspection staff of the Food and Drug Administration, and a member of the technological staff of the Fish and Wildlife Service.

The industry inspection plan contemplates the appointment of at least one inspector in each plant who will be under the general direction of a supervisor employed by the Association. The establishment of the inspection service is the outgrowth of a desire on the part of the fresh fish dealers to furnish the Army with high quality fish. Meetings are being held each Friday for a general discussion of the inspection procedure and a discussion of the problems of fish handling confronting the members of the industry. In the course of the meetings various points of handling and methods of selecting quality fish are brought up for consideration. All those in attendance take part and request technical opinions on the general practices of processing fish. Considerable interest has been shown in these meetings as is evidenced by the attendance of approximately 50 representatives of various fish packing firms in Boston, New Bedford, and Gloucester. It is expected the discussions will continue each Friday for a number of weeks.

MASSACHUSETTS RADIO SERIES COVERING FISHING INDUSTRY COMPLETED

The twenty-fourth and last program in a radio series, Harvest of the Sea, detailing "life" on the Boston Fish Pier from producer to consumer, was given over station WHDH, October 23.

Originally scheduled May 15 for a period of 13 weeks as 15-minute interviews with persons prominent on the Pier, the broadcasts by popular demand were increased to almost twice their contemplated total number.

During the course of these programs, the last of which was with Miss Eleanor Bateman, Division of Markets, State Department of Agriculture, and dealt with seafoods and the consumer point of view, about 50 individuals gave a complete picture of the manifold facets of the fishing industry.

So well received were the programs that it has been necessary to order the entire series mimeographed to meet requests for the scripts. As long as they are available, copies may be obtained by writing to B. E. Lindgren, Associate Fishery Marketing Specialist in Charge, Fishery Market News Service, U. S. Fish and Wildlife Service, 253½ Northern Avenue, Boston. The entire series was in his immediate charge and he acted as interviewer for the radio Station.

FISHERIES OF RHODE ISLAND

Generally fair market conditions and supplies of fish are reported to prevail in most of the more important fishing centers in Rhode Island, according to the mid-October report of the Service's agent in that State. The scallop fisheries in the vicinity of Salt Pond and Little Narragansett Bay, however, are reported to be down 80 percent from the previous year when production was particularly great. The decrease in abundance is especially evident in Little Narragansett Bay where virtually no scallops were found during the season just ending in spite of the fact that the "set" of small scallops in those waters was very heavy in 1940.

Soft clams are fairly plentiful throughout the State although the supply is "spotty" on most grounds. Average net prices to the diggers approximate $2 per bushel and compare favorably with 1940.

Hard clams, especially the "quahaug" size, are said to be fairly plentiful in most areas because of the decrease in production caused by the absorption of watermen by defense projects. Average net prices have risen to $2 per bushel for this grade.

Lobsters are plentiful in all waters except in the Block Island area and highly satisfactory prices have been obtained throughout the season. Lobsters were reported about one-third less abundant in Block Island.

Supplies of fluke are reported good in most waters at present with prices averaging about 11 cents a pound. A long and productive codfishing season is expected.

Trap net operators in the Newport area reported summer fish such as fluke, mackerel, and butterfish to be scarce. Market prices were about the same as in 1940 but there were increases in operating expenses and labor costs.

FISHERIES OF VIRGINIA

Producers in many parts of Virginia were finding it difficult in mid-October to secure a sufficient number of tongers to take up the oysters from their private beds and to obtain enough shuckers to fill the demand for oysters, according to the Service's marketing agent in that area. With the coming of cooler weather the normal increase in the demand for oysters may cause the present shortage of labor to become acute. In the upper Rappahannock River area where there is considerable tonging from public rocks, prices were ranging from 70 cents to $1.00 per bushel, which is higher than was paid at any time last year for oysters from this area. Oysters are reported as being in very good condition in most sections of the State.

Soft crab packers in the upper section of the State report a decline of at least one-third under last year's production. They are concerned, in the absence of conservation measures, lest this decrease becomes permanent.

FISHERIES OF THE SOUTH ATLANTIC STATES

From the last week in September to mid-October fishermen in Morehead City, Beaufort, Atlantic, and other North Carolina ports in that vicinity experienced a record run of spot, according to the Service's marketing agent in that region. Several single catches of over 100,000 pounds were reported, the highest being 145,000 pounds by a six-man crew in Core Sound. With the run still continuing, 2½ million pounds had been caught in three weeks and market prices were still holding up at 3 cents per pound.

The unexpected run of shrimp in North Carolina in 1940 has not been repeated this fall although Southport, which had a very poor shrimp season last year, not sharing in the large run experienced in the northern part of the State, has reported fair catches consistently. Georgia has been getting the larger share of shrimp along the South Atlantic coast, the ports of Thunderbolt, Darien, and Brunswick having a busy season. The shrimp have been medium to large in size and selling at 16 to 18 cents per pound.

Landings of mullet have been heavy in Florida since the middle of July. Cold-storage holdings are approximately five times greater than a year ago.

CHICAGO WHOLESALE MARKET RECEIPTS MAINTAIN INCREASED VOLUME

In the first three-quarters of 1941 Chicago wholesale dealers handled a 13 percent greater volume of fishery products than during the corresponding period in 1940, according to the Service's Chicago Fishery Market News office. Receipts of shellfish were 9 percent under the previous year but more than made up by larger shipments of fresh-water and salt-water fish. September receipts were 22 percent above August, shrimp and sauger shipments being considerably heavier.

Receipts of Fishery Products at Chicago

Item	Sept. 1941	Sept. 1941 compared with Aug. 1941	Sept. 1941 compared with Sept. 1940	9 months Jan. - Sept.	9 mo. 1941 compared with 9 mo. 1940
Classification:	Pounds	Percent	Percent	Pounds	Percent
Fresh-water fish	2,366,000	+ 16	+ 8	25,221,000	+ 12
Salt-water fish	2,074,000	+ 9	+ 14	15,379,000	+ 26
Shellfish, etc.	931,000	+111	+ 5	6,314,000	- 9
Total receipts	5,371,000	+ 22	+ 10	46,914,000	+ 13
Leading items*:					
Lake trout	562,000	+ 8	- 11	4,427,000	+ 8
Sauger	310,000	+1967	+ 95	3,791,000	+ 43
Yellow perch	262,000	- 24	- 15	2,714,000	+ 27
Halibut	859,000	+ 59	+ 8	5,889,000	+ 1
Rosefish fillets	477,000	- 5	+ 13	3,639,000	+ 33
Shrimp	718,000	+308	+ 22	4,003,000	- 14
Leading sources:					
Louisiana	276,000	+117	- 40	2,549,000	+ 64
Massachusetts	934,000	- 16	+ 33	6,918,000	+ 56
Michigan	372,000	- 6	- 39	4,547,000	+ 85
Texas	418,000	+704	+392	1,127,000	+108
Domestic total	3,705,000	+ 14	+ 14	32,041,000	+ 11
Imported total	1,666,000	+ 48	+ 2	14,873,000	+ 15
Transported by:					
Truck	1,944,000	- 2	+ 12	18,889,000	+ 33
Express	1,828,000	+ 21	- 7	12,622,000	- 15
Freight	1,599,000	+ 80	+ 34	15,403,000	+ 22

* Includes fresh and frozen fish.

FISHERIES OF WASHINGTON AND OREGON

During October the activity and returns in the fisheries for dogfish and soupfin shark livers overshadowed every development in Pacific Coast fisheries during the past forty years. Prices paid for soupfin shark livers during October were phenomenal and the returns to the fishermen for individual trips almost unbelievable. Soupfin shark livers brought the fishermen between $6.00 and $9.20 per pound during October, and between 40 cents and 51 cents per pound was paid for dogfish livers. Fishermen have received over one thousand dollars per trip of approximately one week as their share of the sales. One delivery of dogfish and soupfin shark livers made by a halibut boat to Astoria brought a return of $7,126 for the sale. This boat had a crew of five and made the trip in eight days. These fishermen shared over one thousand dollars per man.

Deliveries of dogfish livers to Seattle during October totaled over 400,000 pounds, bringing about $140,000 to the fishermen. Deliveries of soupfin shark livers approximated 19,000 pounds and netted the fishermen over $125,000. The fishery for sharks containing these livers is conducted chiefly by halibut boats using regular halibut set line gear, and by otter-trawlers in the Puget Sound and offshore fishery for bottom fish.

The market in Seattle for oysters, crabs and clams has been exceptionally strong, the demand continuing to exceed the supply despite increasing prices. Labor controversies in the oyster producing area along the Washington coast have reduced production in this fishery. The Puget Sound purse seine fishery produced larger catches of chum salmon during the latter part of October, receiving the highest prices in ten years. "Lingcod", rockfish and sablefish prices for fish sold over the halibut exchange in Seattle also have reached high levels.

SPINY LOBSTER FISHERIES OF CUBA

The total catch of spiny lobsters in the waters of Habana Province during 1940 was reported as 109,995 dozen by the Cuban Ministry of Agriculture, according to Foreign Commerce Weekly. No data are available on the catch in the other Provinces, but it is believed that Habana accounts for the largest percentage of the total catch.

Since the hatching season extends from the latter part of February until the latter part of June or July, Cuban spiny lobsters cannot be caught between March 1 and June 30 of each year. There is also a permanent closed season on the breeding grounds at Ensenada de la Broa on the south coast of Habana Province. In any area during the open months there may be short periods of great abundance followed by a scarcity of lobsters due to unknown causes. The canning season, therefore, is likely to be sporadic.

Lobsters are exported from Cuba in several forms. Some are canned, others exported fresh, still others in the form of chilled lobster meat, as well as chilled or frozen and glazed lobster tails. The fresh lobsters are exported only to Miami. The chilled meat and canned lobsters go mainly to New York, while lobster tails are shipped to both Miami and New York.

In 1940 Cuba exported 122,576 kilograms of fresh spiny lobsters, valued at $43,642, to the United States as compared with 83,781 kilograms valued at $32,805 in 1939. Exports of canned spiny lobsters to the United States in 1940 amounted to 109,646 kilograms, valued at $44,831, very little greater than 1939 exports of 104,722 kilograms valued at $41,909. Total exports of canned spiny lobsters in 1940 and 1939 were 123,675 kilograms and 151,558 kilograms, respectively. In addition to the United States importers were France, Belgium, Italy, Mexico, and Switzerland.

FISHERIES OF BRITISH COLUMBIA

Landings of pilchards in British Columbia totaled 51,553 tons on October 9, according to preliminary final figures issued by the Chief Supervisor of Fisheries, Vancouver, B. C. Although only 200 tons less than the landings in 1938, the largest in recent years, the production of meal and oil differed considerably. In 1941, 9,216 tons of meal and 1,537,637 imperial gallons of oil were produced as compared with 8,891 tons and 2,195,850 gallons in 1938.

In the fall herring fishery 7,905 tons had been landed to October 25, somewhat over one-half last year's total of 15,556 tons on November 2. Canned herring numbered 157,710 cases as compared with 157,049 cases in 1940. The Order in Council governing the inspection of canned fish has been amended to place canned herring under inspection and grading regulations similar to those in force for canned salmon. No herring has been dry-salted this year while about 2,300 tons had been prepared last season.

FISHERIES OF NEWFOUNDLAND

Exports of the new season's catch of codfish in Newfoundland are proceeding satisfactorily at good prices, according to Foreign Commerce Weekly. Spanish buyers have contracted for 80,000 metric quintals of Labrador dried codfish for shipment, beginning in October--the buyers providing the transportation. The United Kingdom market, which normally takes about 30,000 quintals annually, will probably take more this year if shipping is available.

The catch of codfish during the past spring and summer is reported to be the highest in the last 4 years. Totals to the end of July for the past 4 years, not including the Labrador catch, were as follows:

Year	Quintals
1938	402,922
1939	344,055
1940	381,087
1941	415,249

The lobster catch this year was slightly below that of 1940, amounting to approximately 2,500,000 pounds, compared with 2,750,000 pounds for 1940. Export value for the 1941 catch was about 25 percent over the 1940 value. Most of the live lobsters were bought by United States firms.

Exports of fresh salmon were below those of 1940, but exports to the United States were about double the 1940 figures. The market for canned salmon was active, prices remaining at about $9 per case.

MEXICAN SHRIMP FACILITIES EXPANDED

The installation of freezing plants at Guaymas and other Mexican points in Baja California should result in a marked improvement in the quality of the frozen and iced shrimp offered for import in Los Angeles Station territory, according to the Chief of the Food and Drug Administration Station in Los Angeles. Mexican interests are installing a cannery at Guaymas in addition to these freezing plants. They have also converted an old San Francisco ferry boat, the San Pablo, into a shrimp-receiving ship and have purchased a dozen Pacific Coast purse seiners. It is reported in Los Angeles that they are now building 23 boats in Guaymas.

These Mexican interests have been operating packing plants at four points along the Gulf of California. The shrimp industry in Mexican waters was originally developed by Japanese who had a fleet of 20 or more modern trawlers, harvesting several thousand tons of shrimp annually. With the elimination of the Japanese from this trade last year by the Mexican Government, the entire fishing industry in those waters is now under control of Mexicans.

FISH LIVER IMPORTS FROM MEXICO INCREASE

The substantial increase in imports for consumption of fish livers from Mexico during the past 3 years and the first 7 months of 1941 is shown in the following tabulation in Foreign Commerce Weekly.

Year	Volume Pounds	Value (United States currency)
1938	26,623	$ 1,580
1939	175,554	11,266
1940	523,289	49,339
1941 (January-July)	771,838	90,367

DOMESTIC PRODUCTION OF MARINE-ANIMAL OILS INCREASES

Nearly 80,000,000 pounds of marine-animal oils were produced in the United States and Alaska during July, August, and September of the current year, according to data collected by the Fish and Wildlife Service and released by the Bureau of the Census. This was an increase of over 34,000,000 pounds, or 75 percent, as compared with the production during the third quarter of 1940. An increase in the yield of pilchard or sardine oil from 2,422,000 pounds in the third quarter of 1940 to 45,150,000 pounds in the same quarter of the current year accounted for the gain in production. The small yield of pilchard or sardine oil in the third quarter of 1940 was the result of a fishermen's strike during August and September, which greatly curtailed the catch of that species.

A total of 5,761,000 pounds of marine-animal oils were imported for consumption during the quarter ended September 30, 1941. These imports consisted of the following oils: Whale oil, 451,000 pounds; cod oil, 1,910,000 pounds; cod-liver oil, 2,009,000 pounds; and other fish oils, 1,391,000 pounds. Imports of cod oil and other fish oils increased 234 percent

and 1,481 percent, respectively, as compared with those for the same quarter in 1940, while receipts of whale oil and cod-liver oil declined 92 percent and 15 percent, respectively. Exports of domestic fish oils during the third quarter of the year amounted to 218,000 pounds as compared with 302,000 pounds in the same quarter last year.

There is listed below information contained in Bureau of the Census reports dated November 4, 1941, on the production and consumption of marine-animal oils during the third quarter of 1941, and on the factory and warehouse stocks held at the end of the quarter. It will be noted that the poundage of cod and cod-liver oil held on September 30 was less than half the quantity in storage on the same date last year.

Production, Consumption, and Stocks of Marine-animal Oils

Oil		Factory operation for the quarter ending September 30		Factory and warehouse stocks, September 30
		Production	Consumption	
1941		Pounds	Pounds	Pounds
Cod and cod-liver oils		731,000	5,600,000	9,705,000
Fish oils	1/	78,700,000	41,269,000	118,230,000
Whale and sperm oils		264,000	3,149,000	34,724,000
Total		79,695,000	50,018,000	162,659,000
1940				
Cod and cod-liver oils		693,000	3,371,000	21,145,000
Fish oils	2/	44,422,000	35,973,000	96,287,000
Whale and sperm oils		418,000	4,677,000	56,995,000
Total		45,533,000	44,021,000	174,427,000

1/ Includes herring oil, 15,615,000 pounds; menhaden oil, 14,961,000 pounds; and pilchard or sardine oil, 45,150,000 pounds.
2/ Includes herring oil, 14,220,000 pounds; menhaden oil, 25,123,000 pounds; and pilchard or sardine oil, 2,422,000 pounds.
Note: Statistics on the production of marine-animal oils during the third quarter of 1941 have been revised since original publication of the data.

TERMINATION OF THE CONVENTION FOR THE PRESERVATION AND PROTECTION OF FUR SEALS

The Department of State reported on October 24 that as a result of the notice of abrogation dated October 23, 1940, given by the Government of Japan the Convention of July 7, 1911, between the United States of America, Great Britain, Canada, Japan, and the Union of Soviet Socialist Republics for the Preservation and Protection of Fur Seals has terminated.

The authorities of the Government of the United States are giving consideration to possible procedures for preserving the beneficial effect of the Convention and expect to take such steps as may be found practicable to protect the interests of the United States in the fur-seal herd of the Pribilof Islands. Toward this end, the Fish and Wildlife Service has under preparation an ocean survey and study relative to the migratory and feeding habits of the fur seals of these islands.

The views of this Government and the position which it maintains in respect to the return to pelagic sealing have been brought to the attention of the Japanese Government and the other governments' parties to the Convention. It is the hope of this Government that pending the conclusion of a new agreement a temporary arrangement for the protection of the rights and interest of each of the present parties to the Convention may be agreed upon.

The Japanese authorities have indicated informally that it is not the intention of the Japanese Government to abandon the possibility of the regulation of the taking of fur seals by international agreement, and that there is no possibility of an enactment before April 1942 of new Japanese legislation under which Japanese nationals might engage in pelagic sealing.

PRIBILOF FUR-SEAL TAKE SHOWS MARKED INCREASE

A total of 95,013 fur-seal skins were taken at the Pribilof Islands in 1941, representing a marked increase over the 65,263 taken in the preceding year.

In accordance with the terms of the fur-seal convention of 1911, 15 percent was allotted to the Dominion of Canada. In view of the increase this year, however, that Government elected to take delivery of only part of its share and to have the remainder sold in this country.

The Japanese Government, likewise entitled to 15 percent of the take of seal skins at the Pribilof Islands under the provisions of the fur-seal convention, has always followed the practice of receiving its share of the net proceeds of sale, rather than taking delivery of the skins in kind.

FUR-SEAL MEAL OUTPUT BRINGS RECORD PRICE

All previous annual sales records were broken when the 1941 season's output of 746,457 pounds of fur-seal meal from the Government byproducts plant on St. Paul Island (Alaska) brought $23,864.74.

Since none of this meal was required by the Division of Fish Culture for fish food at the hatcheries as in former years, it was all offered for sale. Under the highest bid, 350,238 pounds were sold for $11,482.89, the prices being $67 for 25 tons, $66 for 50 tons, and $65 for 100 tons. The remainder of the output—396,219 pounds—was sold at $62.50 a ton.

In 1940 the bulk of the production—569,536 pounds—was sold at $36.25 per ton.

FROZEN FISH TRADE

Stocks of Frozen Fishery Products Reach New High

A total of 107,255,000 pounds of frozen fish and shellfish were held in United States and Alaska cold-storage plants on October 15, the largest volume of fishery products ever held by domestic freezers. Holdings were over 5,000,000 pounds above the previous high which occurred during the preceding month. Stocks of frozen fishery products on October 15 were 14 percent greater than those in the same month last year, and were 27 percent above the average poundage in storage on October 15 of the previous 5 years. Four items accounted for nearly one-half of the total holdings. These were haddock fillets, halibut, salmon, and whiting. Items showing a marked gain in holdings during the month were mackerel, which showed an increase of 37 percent; salmon, 21 percent; whitefish, 16 percent; and shrimp, 112 percent. The holdings of smelt declined 12 percent during the month, while those of whiting dropped 9 percent.

Holdings of Fishery Products in the United States 1/

Item	Oct. 15 1941	Oct. 15 compared with Sept. 15 1941	Oct. 15 1940	5-yr. av. Oct. 15	Sept. 15 1941	Oct. 15 1940	5-yr. av. Oct. 15
	Pounds	Percent	Percent	Percent	Pounds	Pounds	Pounds
Frozen fish and shellfish:							
Total holdings	107,255,000	+ 5	+ 14	+ 27	102,191,000	94,006,000	84,295,000
Important items:							
Croakers	4,119,000	- 11	+172	+147	4,630,000	1,512,000	1,669,000
Cod fillets	2,313,000	- 4	+ 27	+ 23	2,421,000	1,815,000	1,887,000
Haddock fillets	11,682,000	+ 4	+ 39	+ 39	11,184,000	8,395,000	8,423,000
Rosefish fillets	4,781,000	- 3	+189	(2)	4,911,000	1,655,000	(2)
Halibut	15,523,000	- 3	- 1	+ 24	16,054,000	15,661,000	12,550,000
Mackerel	6,804,000	+ 37	- 25	+ 16	4,984,000	9,032,000	5,878,000
Salmon	10,008,000	+ 21	- 9	+ 2	8,253,000	11,011,000	9,775,000
Smelts	1,570,000	- 12	+ 3	+ 29	1,788,000	1,517,000	1,214,000
Whiting	13,208,000	- 9	+ 26	+ 21	14,442,000	10,519,000	10,907,000
Whitefish	1,647,000	+ 16	- 26	+ 20	1,415,000	2,226,000	1,376,000
Scallops	1,570,000	+ 5	- 16	(2)	1,502,000	1,876,000	(2)
Shrimp	3,808,000	+112	+ 5	(2)	1,800,000	3,635,000	(2)
Cured fish:							
Herring, cured	14,738,000	- 16	- 36	- 16	17,593,000	23,160,000	17,562,000
Salmon, mild-cured	8,404,000	+ 6	+ 17	+ 10	7,946,000	7,175,000	7,612,000

1/ Statistics furnished by the Agricultural Marketing Service, Department of Agriculture.
2/ Data not available.

Mackerel Frozen in Large Volume

The freezing of fishery products continued heavy during the month ending October 15, a total of 27,498,000 pounds of fish and shellfish being frozen during this period. Although this was slightly less than the poundage frozen in the previous month, it was 28 percent greater than the amount frozen during the same period last year. Rosefish fillets led all other items in the poundage frozen, displacing whiting from first position, which the latter had held during the previous 3 months. Freezings of mackerel during the month, which amounted to 2,522,000 pounds, were unusually large for this period of the year. The poundage of frozen mackerel produced during the month showed a gain of 174 percent as compared with the same period last year, and of 296 percent as compared with the average for the previous 5 years. Freezings of all important items except sablefish were above those for the same period last year.

Freezings of Fishery Products in United States Cold-storage Plants 1/
(Figures are for the month ending on the date indicated)

	Oct. 15 1941	Oct. 15 compared with Sept. 15 1941	Oct. 15 1940	5-yr. av. Oct. 15	Sept. 15 1941	Oct. 15 1940	5-yr. av. Oct. 15
	Pounds	Percent	Percent	Percent	Pounds	Pounds	Pounds
Total fish and shellfish	27,498,000	- 4	+ 28	+ 47	28,562,000	21,558,000	18,661,000
Important items:							
Haddock fillets	2,502,000	- 21	+ 53	+ 26	3,150,000	1,631,000	1,978,000
Rosefish fillets	3,301,000	- 16	+ 61	(2)	3,907,000	2,049,000	(2)
Halibut	2,818,000	+ 13	+ 35	+131	2,504,000	2,091,000	1,222,000
Mackerel	2,522,000	+ 43	+174	+296	1,761,000	921,000	637,000
Sablefish	933,000	+100	- 27	+ 4	466,000	1,281,000	899,000
Salmon	2,863,000	- 25	+ 8	- 3	3,818,000	2,645,000	2,958,000
Whiting	3,032,000	- 41	+ 47	+ 85	5,127,000	2,066,000	1,637,000
Shrimp	2,859,000	+130	+ 34	(2)	1,244,000	2,134,000	(2)

1/ Statistics furnished by the Agricultural Marketing Service, Department of Agriculture.
2/ Data not available.

Boston Cold-storage Holdings Diminish Slightly in October

At the end of October, Boston warehouses held 2 percent less frozen fish than on September 24, according to the Service's Boston Fishery Market News office, and 12 percent less than a year previous. With freezer holdings throughout the country increasing, stocks were being moved out of Boston to interior warehouses more rapidly than fresh fish were frozen.

Frozen whiting held in 15 warehouses in Maine and Massachusetts totaled 8,827,000 pounds on November 1--about 140,000 pounds greater than on October 4. Round whiting increased about 1,285,000 pounds to 3,154,000 pounds while the total for dressed, H & G fillets, and skuljoes dropped 1,149,000 pounds to 5,626,000 pounds.

Boston Cold-storage Holdings

Item	Oct. 29, 1941	Oct. 29 compared with Sept. 24, 1941	Oct. 29 compared with Oct. 30, 1940	Sept. 24 1941	Oct. 30,1940
	Pounds	Percent	Percent	Pounds	Pounds
Total fish and shellfish	15,640,000	- 2	-12	15,875,000	17,698,000
Leading items:					
Fillets:					
Cod	406,000	+21	-53	336,000	855,000
Haddock	3,886,000	-31	- 1	5,598,000	3,938,000
Rosefish	554,000	+21	-22	458,000	712,000
Mackerel	3,466,000	+67	-25	2,079,000	4,587,000
Smelt	394,000	-24	+ 3	521,000	384,000
Scallops	353,000	-27	-40	480,000	586,000

New York Cold-storage Stocks almost 10 Million Pounds

A 25 percent increase since September 25 brought New York City's cold-storage holdings to 9,838,000 pounds on October 30, according to the Service's New York Fishery Market News office. The largest increases were in shrimp holdings--542 percent--and in halibut and mackerel stocks, the latter reflecting the continued good catches in the mackerel fishery.

New York Cold-storage Holdings

Item	Oct. 30, 1941	Oct. 30 compared with Sept. 25, 1941	Oct. 30 compared with Oct. 31, 1940	Sept. 25, 1941	Oct. 31,1940
	Pounds	Percent	Percent	Pounds	Pounds
Total fish and shellfish	9,838,000	+ 25	+ 2	7,866,000	9,644,000
Leading items:					
Butterfish	512,000	+ 5	+ 32	488,000	388,000
Halibut	346,000	+ 63	+123	212,000	155,000
Mackerel	1,038,000	+ 63	- 9	638,000	1,141,000
Salmon, king (chinook)	409,000	+ 8	- 38	379,000	659,000
Whitefish	774,000	- 9	- 56	850,000	1,743,000
Scallops	464,000	- 2	+ 4	471,000	448,000
Shrimp	924,000	+542	- 7	144,000	995,000

Chicago Cold-storage Holdings near 5 Million Pounds

The seasonal increase in cold-storage stocks brought Chicago's holdings to 4,823,000 pounds on October 30, according to the Service's Market News office in that city. The 16 percent increase above the previous month was due mostly to larger stocks of shrimp and lake trout. Stocks were also 18 percent heavier than a year ago, additional holdings of rosefish fillets and smelt contributing particularly to the gain.

Chicago Cold-Storage Holdings

Item	Oct. 30, 1941	Oct. 30 compared with Sept. 25, 1941	Oct. 30 compared with Oct. 31, 1940	Sept. 25, 1941	Oct. 31, 1940
	Pounds	Percent	Percent	Pounds	Pounds
Total fish and shellfish	4,823,000	+ 16	+ 18	4,164,000	4,104,000
Leading items:					
Lake herring	51,000	- 58	- 79	121,000	242,000
Lake trout	368,000	+ 77	- 1	208,000	372,000
Smelt	375,000	- 6	+ 40	397,000	268,000
Rosefish fillets	486,000	---	+338	482,000	111,000
Halibut	335,000	- 4	- 34	349,000	507,000
Shrimp	453,000	+150	- 15	181,000	535,000

Canadian Stocks of Frozen Fish Decline

Canadian cold-storage plants held 33,745,000 pounds of frozen fresh fishery products, and 2,891,000 pounds of frozen smoked fish on November 1, 1941, according to information released by the Dominion Bureau of Statistics. This was a decrease of 9 percent in the holdings of frozen fresh fish, but an increase of 33 percent in the stocks of frozen smoked fish as compared with the quantities on hand November 1, 1940.

Three items accounted for 55 percent of the frozen fresh fish and shellfish held by Canadian freezers on November 1. These were halibut, 6,645,000 pounds; sea herring, 6,086,000 pounds; and salmon, 5,691,000 pounds. Other leading items in storage were cod fillets, 1,681,000 pounds; mackerel, 1,172,000 pounds; whitefish, 1,009,000 pounds; pickerel, 997,000 pounds; and tullibee, 966,000 pounds. Holdings of all important items of frozen fresh fish except halibut were less than those on November 1, 1940. Stocks of salmon showed a decline of 35 percent while those of sea herring were down 26 percent. Holdings of halibut were 25 percent above those on November 1, 1940.

Canadian freezers froze 6,359,000 pounds of fresh fish and shellfish during October, a decrease of 39 percent as compared with the same month last year. The principal items frozen during the month were salmon, 1,794,000 pounds; cod fillets, 1,127,000 pounds; tullibee, 683,000 pounds; and pickerel, 535,000 pounds. The freezing of all important items except whitefish declined as compared with October 1940. Reduced freezing of salmon, which decreased from 3,413,000 pounds in October 1940 to 1,794,000 pounds in October of the current year, accounted for the major portion of the decline.

The production of frozen smoked fish in Canada during October amounted to 750,000 pounds--34 percent less than was frozen in the same month last year. Groundfish fillets accounted for 88 percent of the frozen smoked fish produced during the month.

CANNED FISH TRADE

Distributors' and Canners' Stocks of Canned Fish Down from Previous Year

The Quarterly Canned Foods Stock Report for October 1, 1941, as released by the Bureau of the Census shows downward trends for distributors' holdings of salmon and unsold stocks in packers' hands, decreases in stocks of Alaska reds being partially offset by increases in the number of cases of pinks. The net decreases from a year ago were very similar, 9 percent for packers and 12 percent for intermediary warehouses. The fluctuations among the varieties, however, were more marked for unsold stocks of canners--a 69 percent decrease in Alaska reds and a 61 percent increase in pinks. Distributors' stocks of Alaska reds were down 41 percent while pinks were 26 percent above October 1, 1940. That canners' unsold stocks are lower this year in face of a larger pack than in 1940 is a measure of the increase in demand for salmon.

Distributors' holdings of other canned fish covered by this report indicated divergent trends. Stocks of tuna were down one-third from July 1 and were equal to only one-half of those a year ago. While stocks of imported sardines have diminished sharply since the beginning of the war, distributors continue well stocked with domestic varieties. Stocks of Maine sardines were reported double those a year ago, while those of California varieties were up one-tenth.

Alaska Salmon Pack Third Largest in History

Preliminary figures compiled by the Service's Alaska Division at the end of the season on October 25 give 6,865,463 standard cases as the total for all species. This pack has been surpassed only by the 8,309,000 case pack in 1936 and the 7,482,000 case pack in 1934. The pink pack of 4,621,000 cases was a record for that species as was 350,000 cases for silver or coho salmon. However, the red pack was only 1,147,000 cases as compared with 1,977,000 cases for the 5-year average. The pack of chum salmon and king salmon numbered 707,000 and 40,000 cases, respectively, about the same as in recent years.

On November 15 canned salmon quotations maintained the level of October 1 with the exception of Alaska reds which increased from 15 to 30 cents per dozen for one-pound talls and ten cents per dozen for one-pound flats. The quotations following are f.o.b. Pacific Coast shipping points.

Canned Salmon Quotations--Per Dozen Cans

Variety	Can size	Nov. 1, 1941	Nov. 1, 1940
Chinook or king, Columbia River	1-lb. fancy flat	$4.50	$4.00
	½-lb. fancy flat	2.60	2.25
Alaska red	1-lb. tall	3.50 - 3.70	2.50
	1-lb. flat	3.70	2.70 - 2.75
	½-lb. flat	-	1.65 - 1.75
Coho and medium red	1-lb. tall	2.50	1.85 - 2.00
	1-lb. flat	3.00	2.10
	½-lb. flat	1.75	1.25 - 1.30
Chum	1-lb. tall	1.70	1.25 - 1.30
	½-lb. flat	1.10 - 1.15	.90
Pink	1-lb. tall	1.75	1.40
	1-lb. flat	1.90 - 2.00	1.50
	½-lb. flat	1.20 - 1.25	.95
Puget Sound sockeye	1-lb. flat	4.00 - 4.50	3.50 - 3.65
	½-lb. flat	2.50	2.10 - 2.25

Puget Sound Salmon Pack Light in October

On October 25 the Puget Sound salmon pack totaled 315,000 cases, according to the State Department of Fisheries as compared with 106,000 the previous year, 380,000 in 1939 and 431,000 in 1937 on comparable dates. The final figures for the 1941 pack probably will not differ greatly since only a few thousand cases of silver and chum salmon were canned in October. The present pack is made up mainly of sockeye salmon, 110,000 cases; pink salmon, 153,000 cases;and silver salmon, 45,000 cases. The sockeye pack is about double that of the last cycle year in 1937 but the pink pack is only about 60 percent as great as in 1939. The silver salmon pack is far above the 1938 total and about 50 percent larger than the five-year average.

British Columbia Salmon Pack Over 2 Million Cases

The British Columbia salmon pack reached 2,004,000 standard cases on October 25, according to the Chief Supervisor of Fisheries, Vancouver, B. C., as compared with 1,352,000 cases on the comparable date in 1940, 1,460,000 cases in 1937, and 1,780,000 cases in 1936. Chum salmon led with 679,000 cases, followed in order by sockeye, 455,000 cases; pink, 431,000 cases; coho, 389,000 cases; and king, 50,000 cases.

A maximum of 1,200,000 cases was to be shipped to the United Kingdom based on 80 percent of the sockeye pack, 60 percent of the pink pack, 70 percent of the chum pack, and 65 percent of the coho pack. In view of the exceptionally heavy production, these percentages will have to be adjusted or the maximum quantity to be shipped raised. The bulk of the balance of the pack is allotted to Canada, Australia, South Africa, and the Canadian Red Cross.

Shrimp Pack Continues Short

The pack of shrimp in the canneries operating under the Seafood Inspection Service of the Food and Drug Administration amounted to 450,000 standard cases on November 1, according to the Service's New Orleans Fishery Market News office. Since the start of the 1941-42 season on July 1 the pack has lagged behind previous years and is now over 300,000 cases less than the 5-year average for a comparable period. About 200,000 cases were packed from October 4 to November 1. November usually is the last month in which shrimp are packed in quantity, the volume leveling off by mid-December in past years.

A number of Gulf Coast packers reported that, due to the short pack, they had not reentered the market on November 1. The quotations of those still in the market follow for shrimp in the usual wholesale quantities in plain No. 1 tall tins, f.o.b. point of production.

Canned Shrimp Prices—Per Dozen Tins

Size	Wet pack		Dry pack	
	November 1, 1941	November 1, 1940	November 1, 1941	November 1, 1940
Small	$1.60 - $1.80	$1.05 - $1.10	$1.60 - $1.75	$1.05 - $1.10
Medium	1.70 - 1.90	1.10 - 1.15	1.70 - 1.85	1.10 - 1.20
Large	1.85 - 2.00	1.15 - 1.20	1.85 - 1.95	1.15 - 1.25
Extra large or jumbo	1.95 - 2.15 few 2.25	1.20 - 1.25	1.95 - 2.15 few 2.25	1.20 - 1.30

California Sardine Production, Pack and Prices Up

More than 43,000 tons of sardines were landed in California during the last week in October, bringing the total for the season, which opened August 1, to 340,000 tons as compared with 109,000 tons on November 1, 1940, according to the California Sardine Products

Institute. The pack of sardines totaled 2,682,000 standard cases, more than four times the pack during the same three months a year ago when a controversy over prices for raw fish delayed operations for a considerable period.

Canned California sardine quotations, f.o.b. California terminals, were reported to the Service's Seattle Market News office as follows:

Canned California Sardine Quotations--Per Case

Item	Cans per case	November 15, 1941	November 15, 1940
Tomato or mustard sauce			
1-lb. oval	48	$3.80	$3.00 - $3.50
1-lb. tall	48	3.10	-
8 oz. oval	96	3.65	2.90 - 3.00
5 oz. flat	100	3.45	2.85 - 3.10
Natural			
1-lb. tall	48	2.90	2.15 - 2.40

Sardine meal production amounted to 27,139 tons on September 30, according to the Institute while 6,065,654 gallons of oil had been manufactured. Meal prices were reported by the Seattle Market News office to be $60 per ton on November 10 as compared with $47.50 a year ago, and oil 60 cents a gallon as compared with 38 cents.

California Pack of Canned Tuna and Mackerel Decline

During the first nine months of 1941 California canners packed 2,185,000 standard cases of tuna, according to information released by the California Division of Fish and Game. This is 29 percent less than was packed in the same period last year. Decreased production was reported for all species except bonito and yellowtail. The production of tuna flakes and tuna, tonno style, also declined. The pack by species during the first nine months of the year was as follows: Albacore, 99,000 cases; bonito, 216,000 cases; bluefin, 176,000 cases; striped, 324,000 cases; yellowfin, 1,050,000 cases; yellowtail, 143,000 cases; tuna flakes, 140,000 cases; and tuna, tonno style, 37,000 cases.

A total of 404,000 standard cases of tuna was packed in California during September of the current year, a decline of 13 percent as compared with the previous month and 12 percent less than was canned during the same month in 1940. The principal species packed during September were yellowfin tuna, 153,000 cases; striped, 82,000 cases; albacore, 78,000 cases; and bonito, 42,000 cases.

California canners packed 127,000 48-pound cases of mackerel during September, an increase of 19 percent as compared with the same month last year. However, the total pack of this species during the first nine months of 1941 totaled only 380,000 cases, a decrease of 145,000 cases, or 28 percent, as compared with the same period in 1940. Canners at San Pedro packed the equivalent of 364,000 standard cases of mackerel during the period from January to September, inclusive; those in San Diego, 12,000 cases; and firms in Monterey, 4,000 cases.

Large Maine Sardine Pack Reported

The Maine sardine pack is expected to exceed 3 million cases, according to the Boston Station of the Food and Drug Administration. This is by far the largest pack since the days of the first World War. The run of fish has been generally satisfactory, although there were only a few fish in the western part of the State during the first half of the season. Later, however, large schools of herring made their appearance off Portland and Rockland with the result that enough fish are now available in seines to run the factories until the season closes the first of December. There is some possibility of the extension of the packing season if the fish are available during the winter.

FOREIGN FISHERY TRADE

Exports of Edible Fish Below 1940

September exports of edible fishery products from the United States totaled 9,501,000 pounds--23 percent less than the amount exported during the same month in 1940. Shipments of canned salmon during September were far less than those in September of last year, while exports of canned sardines were unusually heavy for this month. During the first 9 months of 1941 a total of 91,411,000 pounds of edible fishery products were exported from the United States, a decrease of 19 percent as compared with the same period last year.

United States Exports of Edible Fishery Products 1/

Item	September 1941	September 1940	Nine months ending with September 1941	Nine months ending with September 1940
	Pounds	Pounds	Pounds	Pounds
Salmon, canned	593,000	8,096,000	14,600,000	48,862,000
Sardines, canned	6,262,000	980,000	46,646,000	49,281,000
Shrimp, canned	23,000	146,000	554,000	1,602,000
Other products	2,623,000	3,084,000	2/ 29,611,000	12,763,000
Total	9,501,000	12,306,000	91,411,000	112,508,000

1/ Data furnished by the Bureau of Foreign and Domestic Commerce.
2/ This item is understood to consist largely of canned sardines.

Sea Herring Again Lead in Fishery Imports

Imports of fresh or frozen sea herring into the United States during September amounted to 10,349,000 pounds, accounting for 35 percent of the 29,736,000 pounds of edible fishery products imported during the month. In September, as in the previous five months, this item was the principal edible fishery product received from foreign countries. Other leading items imported during September were fresh or frozen fresh-water fish, 4,424,000 pounds, and salted groundfish, 4,264,000 pounds, which accounted for 15 percent and 14 percent of the total, respectively. Total imports of edible fishery products during September were 25 percent greater than the poundage received during the same month last year. Increased receipts of fresh or frozen sea herring, salted groundfish, and canned crab meat accounted for the major portion of the gain.

Total imports of edible fishery products during the first nine months of the current year amounted to 231,392,000 pounds, an increase of 12,139,000 pounds as compared with the same period in 1940. The heavy shipments of fresh or frozen sea herring during recent months were reflected in the total imports of this item, which amounted to 58,131,000 pounds in the first nine months of 1941, an increase of 293 percent as compared with the volume received during the same period last year. Receipts of frozen tuna, which are received principally from Japan and canned in California, were nearly 50 percent under the volume received during the first three quarters of 1940. Imports of canned crab meat and tuna, which are also received largely from Japan, likewise showed declines of about one half.

Imports of Edible Fishery Products into the United States

Item	September 1941	September 1940	Nine months ending with September 1941	Nine months ending with September 1940
	Pounds	Pounds	Pounds	Pounds
Fresh or frozen:				
Fresh-water fish	4,424,000	4,595,000	38,399,000	38,996,000
Halibut	562,000	294,000	4,630,000	4,235,000
Salmon	161,000	704,000	7,760,000	5,390,000
Sea herring	10,349,000	3,611,000	58,131,000	14,809,000

Imports of Edible Fishery Products into the United States (Continued)

Item	September 1941	September 1940	Nine months ending with September 1941	Nine months ending with September 1940
Fresh or frozen (continued):	Pounds	Pounds	Pounds	Pounds
Swordfish and sturgeon	266,000	695,000	1,415,000	3,034,000
Tuna	1,269,000	1,147,000	3,222,000	6,258,000
Fish filleted, skinned, boned, etc.	1,368,000	1,598,000	9,853,000	12,056,000
Smelts	43,000	43,000	4,484,000	4,143,000
Lobsters	625,000	575,000	16,078,000	14,441,000
Pickled or salted:				
Cod, haddock, hake, etc.	4,264,000	3,270,000	27,305,000	32,831,000
Herring	1,164,000	960,000	14,767,000	18,707,000
Canned:				
Crab meat	1,181,000	500,000	6,276,000	11,287,000
Lobsters	124,000	183,000	1,503,000	1,251,000
Sardines	615,000	1,198,000	5,539,000	10,508,000
Tuna	259,000	544,000	2,977,000	6,106,000
Other fresh, frozen, salted, canned, etc.	3,062,000	3,815,000	29,053,000	35,201,000
Total	29,736,000	23,732,000	231,392,000	219,253,000

Export Permits for Canadian Fish Meal Withdrawn

The Canadian Government has withdrawn all export permits for all varieties of fish meal in the case of sales made subsequent to October 18, according to the Commercial Fishermen's Weekly. Since the fish meal industry is largely an export business, the United States taking 90 percent of the annual output, the export ban will possibly mean a drastic curtailment of the reduction industry whose other important product, fish oil, has been under the direct control of the Dominion oils administrator since the war started. The demand for fish meal has been fair, current prices being quoted at $70 per ton, while the oil market, offering 50-53 cents per gallon, is slow.

Peruvian Fish Livers Exported to United States

Efforts were made during the past year by Peruvian and American interests to develop the production and exportation of fish livers from Peru, according to Foreign Commerce Weekly. From 40 to 50 tons were shipped to the United States during the past 12 months.

THE COVER PAGE

Mackerel purse-seiners are common sights at the Boston Fish Pier where the scene on the cover page portrays the crew salting the seine as it is being transferred from the deck of the seiner to one of the two seine boats carried. Purse seiners take the bulk of the mackerel caught in New England waters and have made heavy catches this fall. Single fares have reached 100,000 pounds.

The fishing grounds for mackerel along our shores range from Virginia to Maine. The production of mackerel varies greatly from year to year, averaging now probably around 40 million pounds. Sixty years ago the average was about 80 million pounds annually.

Mackerel are used mostly fresh and marketed in the round although large quantities are frozen. Some also are filleted, salted, smoked and canned.

FISHERY TRADE INDICATORS

(Expressed in Thousands of Pounds)

Item	Month	Latest month	Same month a year ago	Previous month
FRESH FISH LANDINGS				
Boston, Mass.	September	27,308	24,644	25,129
Gloucester, Mass.	do	20,346	10,710	18,197
Portland, Maine	do	2,190	1,561	2,503
Boston, Gloucester, and Portland:				
Cod	do	3,618	4,789	3,112
Haddock	do	14,524	12,838	14,777
Pollock	do	1,971	1,795	743
Rosefish	do	16,562	8,062	14,922
Pacific Coast:				
Halibut, North Pacific ports	do	6,352	5,589	6,814
Halibut, Seattle	do	3,297	2,368	2,939
FISH RECEIPTS, CHICAGO 1/				
Salt-water fish	do	2,073	1,818	1,910
Fresh-water fish	do	2,366	2,184	2,034
Shellfish, etc.	do	931	885	442
By truck	do	1,944	1,730	1,990
By express	do	1,828	1,961	1,507
By freight	do	1,599	1,197	889
COLD-STORAGE HOLDINGS 2/				
New York, N. Y.:				
Salt-water fish	October	5,793	4,640	4,885
Fresh-water fish	do	1,786	3,066	1,717
Shellfish, etc.	do	2,259	1,938	1,264
Boston, Mass.:				
Salt-water fish	do	14,609	16,340	14,896
Fresh-water fish	do	31	68	35
Shellfish, etc.	do	1,000	1,290	945
Chicago, Ill.:				
Salt-water fish	do	1,926	1,412	1,805
Fresh-water fish	do	1,880	1,678	1,631
Shellfish, etc.	do	831	769	525
Unclassified	do	186	245	203
United States:				
Cod fillets	do	2,313	1,815	2,421
Haddock fillets	do	11,682	8,395	1,184
Halibut	do	15,523	15,661	16,054
Mackerel	do	6,804	9,032	4,984
Pollock fillets	do	297	415	235
Rosefish fillets	do	4,781	1,655	4,911
Salmon	do	10,008	11,011	8,253
Whiting	do	13,208	10,519	14,442
Shrimp	do	3,808	3,635	1,800
New England, all species	do	30,588	28,485	30,639
Middle Atlantic, all species	do	19,872	14,828	18,164
South Atlantic, all species	do	6,954	3,992	6,679
North Central East, all species	do	13,932	12,112	12,451
North Central West, all species	do	4,334	3,292	4,412
South Central, all species	do	4,062	3,021	2,991
Pacific, all species	do	27,514	28,276	26,826
FOREIGN FISHERY TRADE 3/				
Exports:				
All edible fishery commodities	September	9,501	12,306	7,773
Canned salmon	do	593	8,096	253
Canned sardines	do	6,262	980	4,225
Canned shrimp	do	23	146	39
Imports:				
All edible fishery commodities	do	29,736	23,732	28,193
Fresh-water fish and eels, fresh or frozen	do	4,424	4,595	3,628
Canned tuna	do	259	544	14
Canned sardines	do	615	1,198	136
Cod, haddock, hake, etc., pickled or salted	do	4,264	3,270	4,235
Herring, pickled or salted	do	1,164	960	118
Crab meat, sauce, etc.	do	1,181	500	87
Lobsters, not canned	do	625	575	1,316
Lobsters, canned	do	124	183	161

1/ Includes all arrivals as reported by express and rail terminals, and truck receipts as reported by wholesale dealers including smokers.

2/ Data for individual cities are as of the last Thursday of the month, except those at Boston which are for the last Wednesday of the month, and those for geographical areas and the total of the United States which are as of the 15th of the month.

3/ From data compiled by the Bureau of Foreign and Domestic Commerce.

Note.--Data for the latest month are subject to revision.

PRINCIPAL FISHERY FIELD OFFICES AND LABORATORIES OF THE FISH AND WILDLIFE SERVICE

Division of Fishery Industries

Boston, Mass.	B. E. Lindgren.....	253½ Northern Ave. Market News Service.....
Chicago, Ill.	E. C. Hinsdale.....	200 N. Jefferson St. Market News Service.....
College Park, Md.	J. M. Lemon.....	Fisheries Tech. Laboratory..
Jacksonville, Fla.	S. C. Denham.....	309 Duval Bldg. Market News Service.....
Ketchikan, Alaska.....	M. E. Stansby.....	Fisheries Tech. Laboratory..
Mayaguez, P. R.	J. F. Puncochar.....	Fisheries Tech. Laboratory..
New Orleans, La.	C. E. Peterson.....	1100 Decatur St. Market News Service.....
New York, N. Y.	W. H. Dumont.....	155 John St. Market News Service.....
San Pedro, Calif.	C. B. Tendick.....	Post Office Bldg. Fishery Statistics.....
Seattle, Wash.	V. J. Samson.....	417 Bell St. Terminal. Market News Service.....
Seattle, Wash.	R. W. Harrison.....	2725 Montlake Blvd. Fisheries Tech. Laboratory.....

Division of Fish Culture

		Regional Headquarters
Albuquerque, N. Mex.	Theodore S. Kibbe.....	220 West Copper Ave. Reg.#2.
Atlanta, Ga.	John Blosz.....	316 Glenn Bldg. Reg. #4...
Boston, Mass.	Henry C. Markus.....	1140 Pk. Square Bldg. Reg. #5.
Minneapolis, Minn.	C. F. Culler.....	500 National Bldg. Reg. #3..
Portland, Oreg.	Alphonse Kemmerich.....	600 Weatherly Bldg. Reg. #1..

Division of Fishery Biology

Ann Arbor, Mich.	Dr. John Van Oosten.....	University Museums. Great Lakes Fish. Investigations.
Beaufort, N. C.	Dr. Herbert F. Prytherch....	Fisheries Biological Laboratory.....
Cambridge, Mass.	W. C. Herrington.....	Room A-210 Harvard Biol. Lab. N.At.Fish. Investigations.
College Park, Md.	Robert A. Nesbit.....	Fish. Tech.Laboratory. Mid. & S. Atlantic Fish. Invest.
Columbia, Mo.	Dr. M. M. Ellis.....	101 Willis Ave. Interior Waters Investigations.....
Milford, Conn.	Dr. Victor Loosanoff.....	Fish. Laboratory. New England Oyster Investigations.
New Orleans, La.	M. J. Lindner.....	302 Custom House Bldg. 423 Canal St. Gulf Shrimp Inv.
Pensacola, Fla.	Dr. A. E. Hopkins.....	Box 1826. Gulf Oyster Investigations.....
Seattle, Wash.	George B. Kelez.....	Alaska Fishery Investigations 2725 Montlake Blvd.
	Harlan B. Holmes.....	North Pacific Fish. Invest.. 2725 Montlake Blvd.
Stanford University, Calif.	O. E. Sette.....	Room 450-B Jordan Hall. Pilchard Investigations.....

Division of Alaska Fisheries

Cordova, Alaska.....	Daniel W. Bates.....	Alaska Fisheries Service....
Juneau, Alaska.....	J. Steele Culbertson.....	Federal Bldg., Alaska Fisheries Service.....
Ketchikan, Alaska.....	Bertel W. Johnson.....	Alaska Fisheries Service....
Seattle, Wash.	Clarence L. Olson.....	706 Federal Bldg. Alaska
	(Miss) Ted Murphy.....	Fisheries Service.....

THE MINERAL CONTENT OF THE EDIBLE PORTIONS OF SOME AMERICAN FISHERY PRODUCTS

Investigational Report No. 41

In addition to the established value of fishery products as protein foods and the importance of many of them as sources of vitamins, seafoods also are excellent sources of many essential minerals, according to Fisheries Investigational Report No. 41, entitled "The Mineral Content of the Edible Portions of Some American Fishery Products", by Hugo W. Nilson and E. J. Coulson. The report brings out the following facts, among others:

1. The flesh of canned salmon is an excellent source of protein and calories. The bones are soft and are an exceptional source of bone forming minerals. Canned salmon contains an equal quantity of magnesium, almost twice the phosphorus and about fifteen times as much calcium as beef round.

2. Oysters are an excellent source of iron and copper and are one of the best sources of iodine. They follow pork and beef as a source of iron and are first in copper content among common food stuffs on the basis of an average serving portion. They also contain almost half as much calcium, 5 times as much magnesium and more phosphorus than milk on an equal weight basis.

3. Shrimp contain an equal quantity of phosphorus, twice the magnesium, and almost 5 times as much calcium as beef round. They include almost one-half the iron content of oysters and the copper content approximates that of white bread. Shrimp also is an excellent source of iodine.

The report also includes information on the mineral content of fillets and crab meat and discusses the daily requirements of essential minerals.

The report may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 5 cents. If purchased in quantity lots of 100 or more, a discount of 25 percent is allowed.